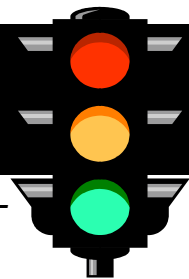


Occupant Protection 2004

OCCUPANT PROTECTION

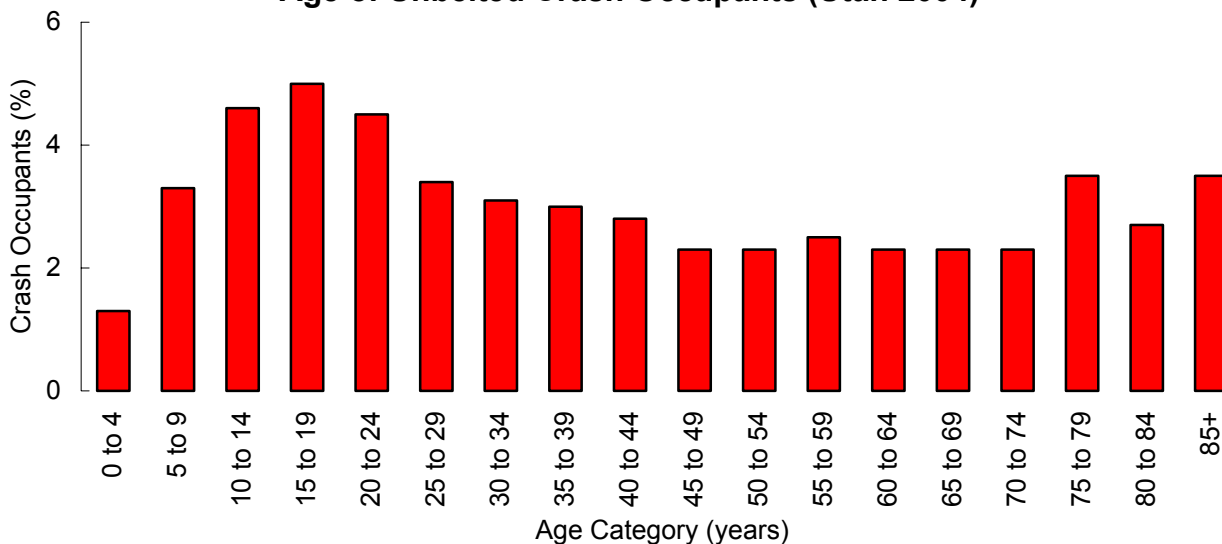


Failure to "buckle up" contributes to more fatalities than any other traffic-safety-related behavior.

Did you know that in 2004 . . .

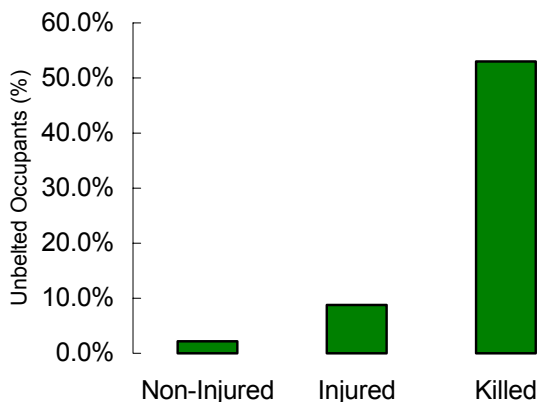
- Unbelted crash occupants were 31 times more likely to die in a crash than belted crash occupants.
- An unbelted crash occupant was killed in Utah every 2 days.

Age of Unbelted Crash Occupants (Utah 2004)



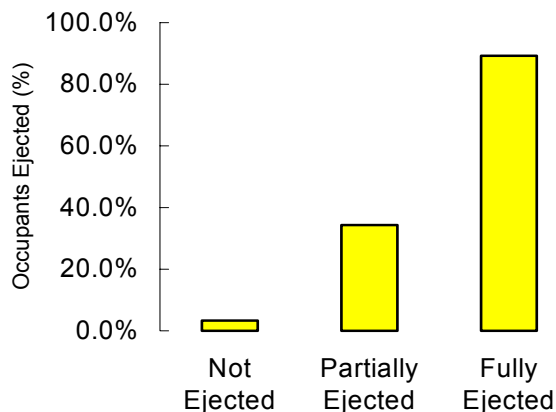
- The highest percentage of unbelted crash occupants were aged 15 to 19 years (5.0%)

Injury Severity of Unbelted Occupants (Utah 2004)



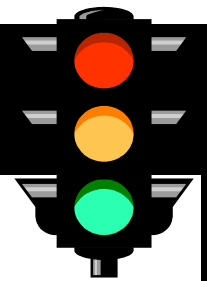
- The above graph shows that 53.0% of crash occupants killed in a crash were unbelted.
- The majority of persons who survived a crash reported wearing a seatbelt.

Ejection and Seatbelt Use (Utah 2004)



- The above graph shows that 89.2% of crash occupants fully ejected from a motor vehicle were unbelted. Only 3.3% of crash occupants not ejected from a motor vehicle were unbelted.

OCCUPANT PROTECTION



**Percent of Children in Crashes Using Child Safety Seats
(Aged 0 to 8 years)**



- While 86.0% of 0 to 1 year olds were reported as being in a child safety seat at the time of the crash, 72.8% of 2 to 4 year olds, and 13.7% of 5 to 8 year olds were reported as being in a child safety seat.
- The decrease in child safety seat use for children aged 2 to 8 years is concerning. The National Highway Traffic Safety Administration recommends that older children ride in belt-positioning booster seats until they are approximately 80 pounds and can use an adult-size lap and shoulder belt system. The percentages of child safety seat use in the above graph indicate that children are often moved to adult-sized seatbelts prematurely.

Child Safety Seat Recommendations:

- Infants should be placed in a rear-facing safety seat until they are at least 20 pounds AND one year of age.
- NEVER place a rear-facing child safety seat in the front seat of a vehicle with a passenger side air bag.
- Children over one year of age weighing 20-40 pounds should ride in forward facing child safety seats.
- Older children (approximately 4-8 years of age) should ride in belt-positioning booster seats until they are approximately 80 pounds and can use an adult-size lap and shoulder belt system.
- Avoid using secondhand child safety seats especially if it does not have the original instruction booklet, if it has been used in a crash, it does not have the manufacturer's date and model number on it, or if it is more than six years old.
- If your car has lap/shoulder combination belts, it could be critical to use a locking clip to properly secure your safety seat to the car. Consult the vehicle owner's manual.
- The safest place for any child aged 12 and under is in the back seat of the vehicle.

Seatbelt Recommendations:

- Always use both the lap and shoulder belt. When worn properly, the shoulder belt should fit across the collar bone and the lap belt should fit low over the hips.
- Never place the shoulder strap under your arm or behind your back.
- Use belt-positioning booster seats for children who have outgrown their toddler safety seat (at about 4 years of age and 40 pounds). Booster seats help position an adult-size seatbelt for a safer fit on children.

Safety Restraint Laws (Effective July 1, 2000):

- Utah law requires all motor vehicle occupants to be wearing a seatbelt when traveling in a motor vehicle. This is a secondary law which means a person may be issued a citation and subject to a \$45 fine only when the police officer has stopped the vehicle for another reason.
- The law is primary for drivers and passengers under age 19 years.
 - ⇒ Children age 4 years and under must ride in an approved child safety seat; and
 - ⇒ Children aged 5 to 19 years must ride in an approved child safety seat or safety belt.
 This primary law means a person may be issued a citation and subject to a fine of not more than \$45 if a law enforcement officer notices children are not properly restrained.

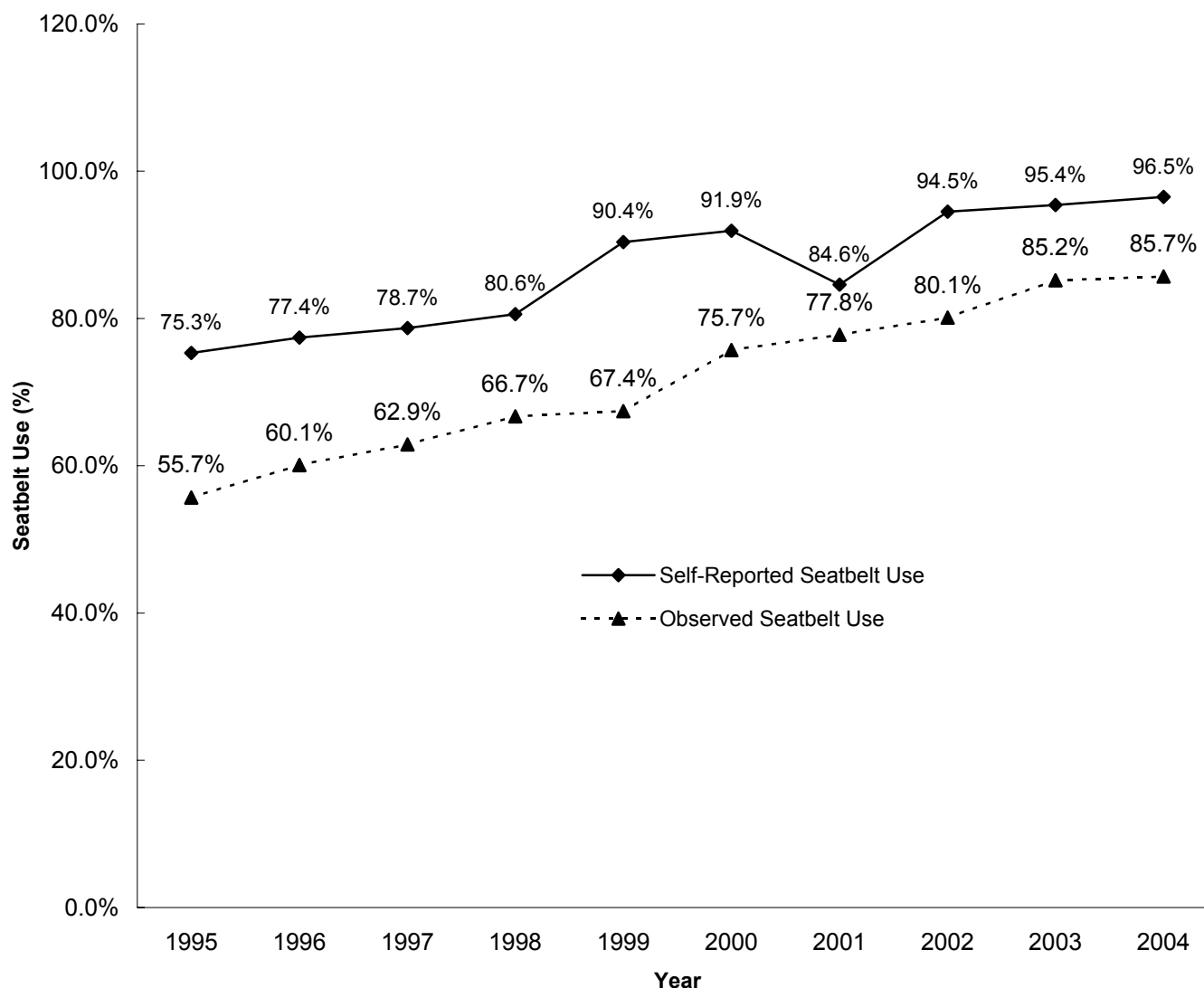
Section 2: Occupant Protection

Section 2: Occupant Protection 2004

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Trends

Seatbelt Use of Drivers and Front Seat Passengers In Crashes and Observational Studies (Utah 1995-2004)



- Historically, there have been differences between self-reported seatbelt use of people involved in crashes, and seatbelt use that is observed by researchers in observational studies.
- The difference between self-reported seatbelt use of people involved in crashes, and observed seatbelt use may be due to over-reporting by the people involved in crashes.
- The above graph compares the self-reported and observed percentage of seatbelt use by drivers and front-seat passengers.
- While there is some year-to-year variation, the ten-year trend shows an increase of seatbelt use by drivers and front-seat passengers in both crashes and observational studies.
- In 2004, the observational seatbelt use increased to 85.7% from 85.2% in 2003; a 0.6% increase.
- The 2004 self-reported seatbelt use percentage of people involved in crashes was 96.5%; a 1% increase from 2003.

Counties

Seatbelt Use of Persons Killed by County (Utah 2004)

Persons			
County	Seatbelt Use	Fatalities #	Usage %
Beaver	Belted	0	0.0%
	Unbelted	1	100.0%
Box Elder	Belted	5	71.4%
	Unbelted	2	28.6%
Cache	Belted	5	50.0%
	Unbelted	5	50.0%
Carbon	Belted	1	25.0%
	Unbelted	3	75.0%
Daggett	Belted	0	0.0%
	Unbelted	0	0.0%
Davis	Belted	3	75.0%
	Unbelted	1	25.0%
Duchesne	Belted	0	0.0%
	Unbelted	3	100.0%
Emery	Belted	8	72.7%
	Unbelted	3	27.3%
Garfield	Belted	0	0.0%
	Unbelted	0	0.0%
Grand	Belted	5	62.5%
	Unbelted	3	37.5%
Iron	Belted	1	16.7%
	Unbelted	5	83.3%
Juab	Belted	0	0.0%
	Unbelted	2	100.0%
Kane	Belted	2	66.7%
	Unbelted	1	33.3%
Millard	Belted	3	23.1%
	Unbelted	10	76.9%
Morgan	Belted	0	0.0%
	Unbelted	1	100.0%

Persons			
County	Seatbelt Use	Fatalities #	Usage %
Piute	Belted	0	0.0%
	Unbelted	1	100.0%
Rich	Belted	2	66.7%
	Unbelted	1	33.3%
Salt Lake	Belted	23	69.7%
	Unbelted	10	30.3%
San Juan	Belted	1	50.0%
	Unbelted	1	50.0%
Sanpete	Belted	1	50.0%
	Unbelted	1	50.0%
Sevier	Belted	0	0.0%
	Unbelted	4	100.0%
Summit	Belted	3	50.0%
	Unbelted	3	50.0%
Tooele	Belted	6	28.6%
	Unbelted	15	71.4%
Uintah	Belted	0	0.0%
	Unbelted	3	100.0%
Utah	Belted	8	42.1%
	Unbelted	11	57.9%
Wasatch	Belted	4	57.1%
	Unbelted	3	42.9%
Washington	Belted	3	50.0%
	Unbelted	3	50.0%
Wayne	Belted	0	0.0%
	Unbelted	0	0.0%
Weber	Belted	3	60.0%
	Unbelted	2	40.0%
Statewide	Belted	87	47.0%
	Unbelted	98	53.0%

- The above table shows the seatbelt use by county of persons killed in motor vehicle crashes.
- Seatbelt use is reported for occupants in a passenger car, light truck, van or SUV. Occupants are considered "belted" if they were coded as using a shoulder/lap belt, lap belt or a child safety seat at the scene of the crash.
- While seatbelt use is self-reported by the crash occupant in the majority of crashes, the officer determines seatbelt use in the event of a fatal or severe injury crash.

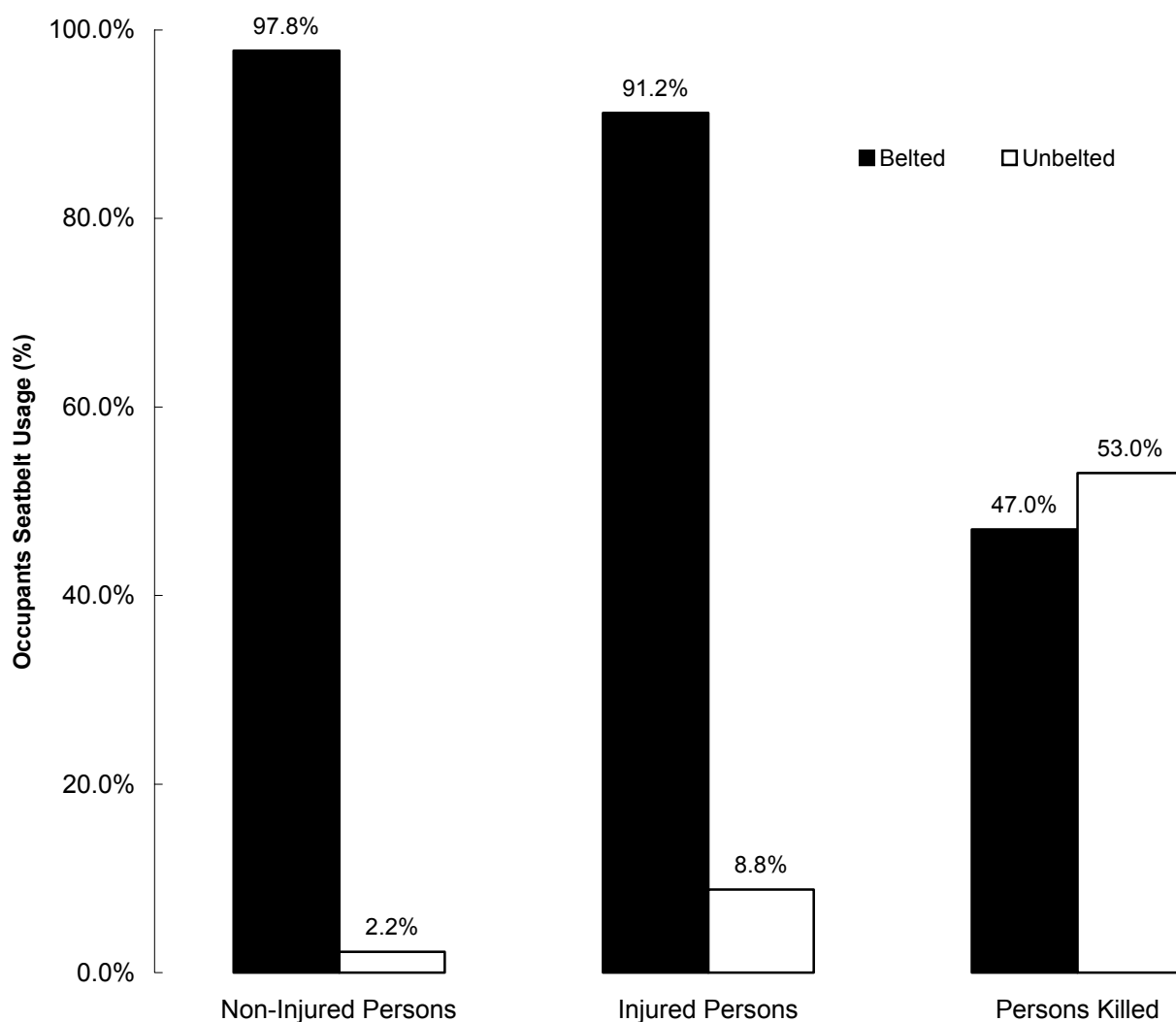
Occupant Characteristics (Including Driver)

Seatbelt Use by Injury Severity (Utah 2004)

Seatbelt Use	Persons							
	Non-Injured Persons		Injured Persons		Persons Killed		Total Persons	
	#	%	#	%	#	%	#	%
Belted	92,661	97.8%	21,954	91.2%	87	47.0%	114,702	96.4%
Unbelted	2,066	2.2%	2,111	8.8%	98	53.0%	4,275	3.6%
Total	94,727	100.0%	24,065	100.0%	185	100.0%	118,977	100.0%

NOTE: Seatbelt use may be inflated due to over-reporting by the people involved in crashes.

Seatbelt Use by Injury Severity (Utah 2004)



- The majority of persons who survived a crash reported wearing a seatbelt; non-injured persons (97.8%), injured persons (91.2%).
- In contrast, less than half (47.0%) of the persons killed in a crash were belted.
- In fact, unbelted crash occupants were 31 times more likely to be killed than belted crash occupants.

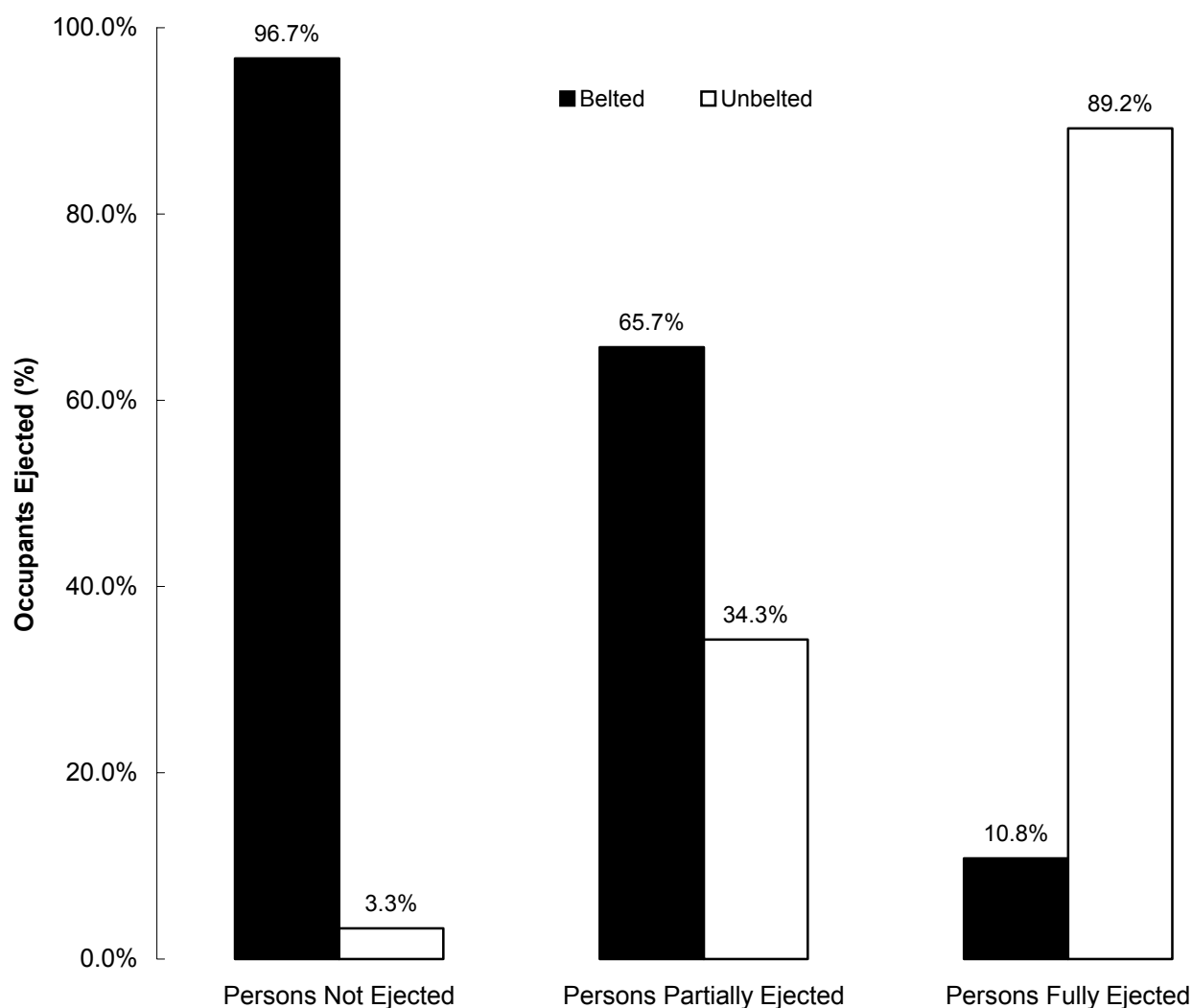
Occupant Characteristics (Including Driver)

Ejection and Seatbelt Use (Utah 2004)

Seatbelt Use	Persons							
	Persons Not Ejected		Persons Partially Ejected		Persons Fully Ejected		Total Persons	
	#	%	#	%	#	%	#	%
Belted	95,997	96.7%	67	65.7%	32	10.8%	96,096	96.4%
Unbelted	3,285	3.3%	35	34.3%	265	89.2%	3,585	3.6%
Total	99,282	100.0%	102	100.0%	297	100.0%	99,681	100.0%

NOTE: Seatbelt use may be inflated due to over-reporting by the people involved in crashes.

Ejection and Seatbelt Use (Utah 2004)



- The above table and graph show an inverse relationship between ejection from a motor vehicle and seatbelt use.
- The majority of crash occupants fully ejected from a motor vehicle (89.2%) were reported as being unbelted, compared to only 3.3% of crash occupants not ejected from a motor vehicle.

Occupant Characteristics (Including Driver)

Seatbelt Use by Age of Crash Occupants (Utah 2004)

Persons									
Age	Seatbelt Use	Non-Injured Persons		Injured Persons		Persons Killed		Total Persons	
		#	%	#	%	#	%	#	%
0-4	Belted	4,833	99.0%	552	95.5%	4	100.0%	5,389	98.7%
	Unbelted	47	1.0%	26	4.5%	0	0.0%	73	1.3%
5-9	Belted	3,408	98.1%	602	89.7%	2	66.7%	4,012	96.7%
	Unbelted	67	1.9%	69	10.3%	1	33.3%	137	3.3%
10-14	Belted	3,240	97.3%	663	87.2%	3	60.0%	3,906	95.4%
	Unbelted	90	2.7%	97	12.8%	2	40.0%	189	4.6%
15-19	Belted	18,222	97.0%	3,881	86.6%	8	42.1%	22,111	95.0%
	Unbelted	562	3.0%	599	13.4%	11	57.9%	1,172	5.0%
20-24	Belted	14,689	97.3%	3,633	89.0%	12	36.4%	18,334	95.5%
	Unbelted	400	2.7%	448	11.0%	21	63.6%	869	4.5%
25-29	Belted	9,864	97.9%	2,451	91.8%	9	37.5%	12,324	96.6%
	Unbelted	207	2.1%	218	8.2%	15	62.5%	440	3.4%
30-34	Belted	7,060	98.2%	1,886	92.6%	7	43.8%	8,953	96.9%
	Unbelted	132	1.8%	150	7.4%	9	56.3%	291	3.1%
35-39	Belted	5,539	98.2%	1,341	92.5%	4	40.0%	6,884	97.0%
	Unbelted	100	1.8%	108	7.5%	6	60.0%	214	3.0%
40-44	Belted	5,558	98.4%	1,445	93.3%	4	28.6%	7,007	97.2%
	Unbelted	88	1.6%	104	6.7%	10	71.4%	202	2.8%
45-49	Belted	4,868	98.3%	1,243	95.4%	4	66.7%	6,115	97.7%
	Unbelted	83	1.7%	60	4.6%	2	33.3%	145	2.3%
50-54	Belted	4,016	98.5%	1,097	95.1%	5	50.0%	5,118	97.7%
	Unbelted	61	1.5%	56	4.9%	5	50.0%	122	2.3%
55-59	Belted	2,914	98.3%	838	95.2%	4	40.0%	3,756	97.5%
	Unbelted	50	1.7%	42	4.8%	6	60.0%	98	2.5%
60-64	Belted	2,173	98.5%	584	95.4%	3	60.0%	2,760	97.7%
	Unbelted	34	1.5%	28	4.6%	2	40.0%	64	2.3%
65-69	Belted	1,499	98.3%	401	96.2%	6	75.0%	1,906	97.7%
	Unbelted	26	1.7%	16	3.8%	2	25.0%	44	2.3%
70-74	Belted	1,184	98.3%	334	96.3%	2	50.0%	1,520	97.7%
	Unbelted	21	1.7%	13	3.7%	2	50.0%	36	2.3%
75-79	Belted	963	97.4%	291	93.9%	3	100.0%	1,257	96.5%
	Unbelted	26	2.6%	19	6.1%	0	0.0%	45	3.5%
80-84	Belted	614	98.2%	186	94.9%	1	50.0%	801	97.3%
	Unbelted	11	1.8%	10	5.1%	1	50.0%	22	2.7%
85+	Belted	387	96.8%	105	97.2%	2	50.0%	494	96.5%
	Unbelted	13	3.3%	3	2.8%	2	50.0%	18	3.5%
Unknown	Belted	1,630	97.1%	421	90.3%	4	80.0%	2,055	95.6%
	Unbelted	48	2.9%	45	9.7%	1	20.0%	94	4.4%
Total	Belted	92,661	97.8%	21,954	91.2%	87	47.0%	114,702	96.4%
	Unbelted	2,066	2.2%	2,111	8.8%	98	53.0%	4,275	3.6%

NOTE: Seatbelt use may be inflated due to over-reporting by the people involved in crashes.

- Overall, crash occupants aged 15 to 19 years had the highest percentage of being unbelted (5.0%).
- For injured crash occupants, persons aged 15 to 19 years were again the most likely to be unbelted (13.4%).
- For persons killed, crash occupants aged 40 to 44 years had the highest percentage of being unbelted (71.4%).

Occupant Characteristics (Including Driver)

Seatbelt Use by Gender of Crash Occupants (Utah 2004)

Persons									
Gender	Seatbelt Use	Non-Injured Persons		Injured Persons		Persons Killed		Total Persons	
		#	%	#	%	#	%	#	%
F	Belted	42,194	98.2%	12,583	92.9%	36	49.3%	54,813	96.9%
	Unbelted	775	1.8%	962	7.1%	37	50.7%	1,774	3.1%
M	Belted	50,393	97.5%	9,355	89.1%	51	45.5%	59,799	96.0%
	Unbelted	1,285	2.5%	1,148	10.9%	61	54.5%	2,494	4.0%
Unknown	Belted	74	92.5%	16	94.1%	0	0.0%	90	92.8%
	Unbelted	6	7.5%	1	5.9%	0	0.0%	7	7.2%
Total	Belted	92,661	97.8%	21,954	91.2%	87	47.0%	114,702	96.4%
	Unbelted	2,066	2.2%	2,111	8.8%	98	53.0%	4,275	3.6%

NOTE: Seatbelt use may be inflated due to over-reporting by the people involved in crashes.

- Overall, female (96.9%) and male crash occupants (96.0%) reported similar seatbelt use.
- For injured crash occupants, reported seatbelt use was greater for females (92.9%) than for males (89.1%).
- For persons killed, female crash occupants had higher seatbelt use (49.3%) than male crash occupants (45.5%). In fact, the majority of male occupants killed in a crash were unbelted (54.5%).
- In addition, reported seatbelt use for fatalities was almost half of that reported for total crash occupants regardless of gender.

Seatbelt Use by Occupant Placement (Utah 2004)

Persons									
Occupant Placement	Seatbelt Use	Non-Injured Persons		Injured Persons		Persons Killed		Total Persons	
		#	%	#	%	#	%	#	%
Driver	Belted	62,973	98.0%	15,162	92.6%	58	49.2%	78,193	96.9%
	Unbelted	1,275	2.0%	1,204	7.4%	60	50.8%	2,539	3.1%
Front Seat Passenger	Belted	15,767	97.4%	4,442	88.9%	18	47.4%	20,227	95.3%
	Unbelted	428	2.6%	553	11.1%	20	52.6%	1,001	4.7%
Back Seat Passenger	Belted	13,921	97.5%	2,350	86.9%	11	37.9%	16,282	95.7%
	Unbelted	363	2.5%	354	13.1%	18	62.1%	735	4.3%
Total	Belted	92,661	97.8%	21,954	91.2%	87	47.0%	114,702	96.4%
	Unbelted	2,066	2.2%	2,111	8.8%	98	53.0%	4,275	3.6%

NOTE: Seatbelt use may be inflated due to over-reporting by the people involved in crashes.

- Reported seatbelt use did not vary substantially by seating location. Among all occupants, drivers reported the highest seatbelt use (96.9%) compared to persons in other seating locations.

Occupant Characteristics (Including Driver)

Air Bags and Seatbelt Use (Utah 2004)

Persons (Whose Airbag Deployed)									
Age	Seatbelt Use	Non-Injured Persons		Injured Persons		Persons Killed		Total Persons	
		#	%	#	%	#	%	#	%
0-4	Belted	13	100.0%	2	40.0%	1	100.0%	16	84.2%
	Unbelted	0	0.0%	3	60.0%	0	0.0%	3	15.8%
5-9	Belted	11	91.7%	9	81.8%	0	0.0%	20	87.0%
	Unbelted	1	8.3%	2	18.2%	0	0.0%	3	13.0%
10-14	Belted	14	100.0%	21	87.5%	0	0.0%	35	92.1%
	Unbelted	0	0.0%	3	12.5%	0	0.0%	3	7.9%
15-19	Belted	283	95.9%	317	87.6%	2	66.7%	602	91.2%
	Unbelted	12	4.1%	45	12.4%	1	33.3%	58	8.8%
20-24	Belted	275	96.8%	303	86.3%	3	75.0%	581	90.9%
	Unbelted	9	3.2%	48	13.7%	1	25.0%	58	9.1%
25-29	Belted	139	96.5%	181	94.8%	3	100.0%	323	95.6%
	Unbelted	5	3.5%	10	5.2%	0	0.0%	15	4.4%
30-34	Belted	93	98.9%	145	92.9%	1	50.0%	239	94.8%
	Unbelted	1	1.1%	11	7.1%	1	50.0%	13	5.2%
35-39	Belted	60	98.4%	87	95.6%	0	0.0%	147	96.7%
	Unbelted	1	1.6%	4	4.4%	0	0.0%	5	3.3%
40-44	Belted	60	98.4%	92	94.8%	2	100.0%	154	96.3%
	Unbelted	1	1.6%	5	5.2%	0	0.0%	6	3.8%
45-49	Belted	57	100.0%	80	95.2%	2	100.0%	139	97.2%
	Unbelted	0	0.0%	4	4.8%	0	0.0%	4	2.8%
50-54	Belted	51	98.1%	68	97.1%	0	0.0%	119	97.5%
	Unbelted	1	1.9%	2	2.9%	0	0.0%	3	2.5%
55-59	Belted	24	92.3%	58	95.1%	2	66.7%	84	93.3%
	Unbelted	2	7.7%	3	4.9%	1	33.3%	6	6.7%
60-64	Belted	26	96.3%	44	97.8%	1	50.0%	71	95.9%
	Unbelted	1	3.7%	1	2.2%	1	50.0%	3	4.1%
65-69	Belted	15	100.0%	35	100.0%	0	0.0%	50	100.0%
	Unbelted	0	0.0%	0	0.0%	0	0.0%	0	0.0%
70-74	Belted	15	93.8%	27	100.0%	0	0.0%	42	97.7%
	Unbelted	1	6.3%	0	0.0%	0	0.0%	1	2.3%
75-79	Belted	8	100.0%	27	90.0%	0	0.0%	35	92.1%
	Unbelted	0	0.0%	3	10.0%	0	0.0%	3	7.9%
80-84	Belted	6	100.0%	27	100.0%	0	0.0%	33	100.0%
	Unbelted	0	0.0%	0	0.0%	0	0.0%	0	0.0%
85+	Belted	1	100.0%	8	100.0%	1	100.0%	10	100.0%
	Unbelted	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Unknown	Belted	14	100.0%	19	90.5%	0	0.0%	33	94.3%
	Unbelted	0	0.0%	2	9.5%	0	0.0%	2	5.7%
Total	Belted	1,165	97.1%	1,550	91.4%	18	78.3%	2,733	93.6%
	Unbelted	35	2.9%	146	8.6%	5	21.7%	186	6.4%

NOTE: Seatbelt use may be inflated due to over-reporting by the people involved in crashes.

- The above table shows the age of crash occupants whose air bag deployed and the percentage of belt use.
- A majority of the total (93.6%) and injured occupants (91.4%) whose air bag deployed were wearing a seatbelt. However, fewer (78.3%) persons killed, whose air bag deployed, were wearing a seatbelt.
- Airbags are a supplemental safety device, and were designed to be used with a seatbelt. Therefore, airbags are most effective when used in conjunction with a seatbelt.

Children and Restraint Use

Restraint Use for Children Age 0 to 8 Years by Seating Location (Utah 2004)

Children								
Seating Location	Restraint Use	Children Ages 0-1		Children Ages 2-4		Children Ages 5-8		Total Children
		#	%	#	%	#	%	# %
Front Middle Seat	Child Safety Seat	18	81.8%	16	32.7%	6	8.0%	40 27.4%
	Other Belted	2	9.1%	29	59.2%	65	86.7%	96 65.8%
	Unbelted	2	9.1%	4	8.2%	4	5.3%	10 6.8%
Front Right Seat	Child Safety Seat	47	66.2%	93	46.5%	28	4.5%	168 18.9%
	Other Belted	23	32.4%	102	51.0%	551	89.0%	676 76.0%
	Unbelted	1	1.4%	5	2.5%	40	6.5%	46 5.2%
Back Seat	Child Safety Seat	1,623	86.8%	2,433	75.0%	533	15.4%	4,589 53.6%
	Other Belted	230	12.3%	771	23.8%	2,825	81.9%	3,826 44.7%
	Unbelted	17	0.9%	41	1.3%	92	2.7%	150 1.8%
Total	Child Safety Seat	1,688	86.0%	2,542	72.8%	567	13.7%	4,797 50.0%
	Other Belted	255	13.0%	902	25.8%	3,441	83.0%	4,598 47.9%
	Unbelted	20	1.0%	50	1.4%	136	3.3%	206 2.1%

- The above table shows that as children's age increased, so did their likelihood to be unbelted. The unbelted percentage for children aged 0 to 1 years was 1.0%, while the unbelted percentage for children aged 5 to 8 years was 3.3%.
- The majority of children aged 0 to 1 years (86.0%) were in a child safety seat at the time of the crash, compared to 72.8% of 2 to 4 year olds, and 13.7% of 5 to 8 year olds.
- Children aged 0 to 1 years were 2 times more likely to be in a child safety seat than children between the ages of 2 to 4 years.
- The decrease in child safety seat use for children aged 2 to 4 years and 5 to 8 years is concerning. The National Highway Traffic Safety Administration recommends that older children ride in belt-positioning booster seats until they are approximately 80 pounds and can use an adult-size lap and shoulder belt system. The percentages of child safety seat use in the above table indicate that children are often moved to adult-sized seatbelts prematurely.

